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9 October 1980

# Worldwide Report

EPIDEMIOLOGY

No. 202

**FBIS**

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COSTA RICA

MALNUTRITION DIMINISHES IN CHILDREN UNDER SIX YEARS OF AGE

San Jose LA NACION in Spanish 18 Aug 80 p 8A

[Text] The prevalence of first-, second- and third-degree malnutrition among children under 6 years of age has decreased considerably over the period 1966-1978, a decrease which can be observed in a more marked way during the period 1975-1978. The previous statement is part of an article on the nutritional situation among children under 6 years of age in Costa Rica which was published in the bulletin of the Nutritional Information System (SNI).

According to the report, upon analysis of the percentages of moderate (second-degree) and severe (third-degree) malnutrition, it is possible to note that in 1966, 13.7 percent of the children were in the above categories, but in 1975, the figure was reduced to 12.3 percent and to 8.4 percent in 1978.

The article points out that even where the samples in the study vary, they are valid for a preliminary analysis of the directions of change in the nutritional state of our country.

Moreover, with respect to the information on retarded growth--that is, cases of children 90 percent or more below size according to age--the article demonstrates that while in 1966 the proportion of children with retarded growth was 16.9 percent, in 1975 it was 16.9 percent [as published] and 6.8 percent in 1978.

With the limitations imposed by the use of variable samples, the article notes, the analysis of the anthropometric data of the aforementioned studies shows that considerable improvement has occurred in the nutritional state of children under 6 between 1966 and 1978.

Furthermore, the changes in the figures on disease and general mortality, infant mortality and mortality from 1 to 4 years of age which have occurred in our country during the last 15 years support the conclusions about the improvement.

Likewise, the article explains that the SNI will make efforts to compile anthropometric information such as the statistics on height and weight among schoolchildren. This will allow a more accurate evaluation of the order of magnitude of the nutritional changes made in different parts of Costa Rica.

#### Findings

In the first part of the article, some significant anthropometric findings are established on the results of the national study on nutrition in 1978, both at the national level and by degrees of urbanization of the areas included in the study.

In the category of weight according to age, it was determined that 8.6 percent of the children evaluated were at second or third stages of malnutrition, a percentage which, when applied to the total population of children 0 to 6 years of age in 1978, indicates that approximately 28,400 children are suffering or have suffered from this disease.

As to growth retardation, that is to say small children with a height less than 90 percent of that expected for their age, the article notes that 7.6 percent of the children studied suffered from growth retardation and projecting this to the total child population reveals that about 25,200 children have this problem.

The study also reveals that 21.3 percent of the children were found to have a weight deficiency with respect to their height. Among them, 3.5 percent are classified as "weakened," having only 80 percent of the weight expected for their height, a figure which represents a total of 11,000 children "weakened" in the country.

#### Comparisons

In the study, the average weight of Costa Rican children of both sexes, by age, is compared with the average standard in Iowa, a town [sic] in the United States.

The average figures for height among Costa Rican children between 0 and 18 months are similar to the average of the Americans. But after 18 months, the average figures for height are below the Iowa average. At 54 months this difference is almost 5 cm.

#### Rural and Urban

In a comparison between children from the city and the countryside, the results are revealing. For instance, the study shows that malnutrition of the second and third degree is present in sparsely populated rural areas in the amount of 12 percent, while on the urban level it is 6 percent.

On the other hand, 7.7 percent of children in rural areas are overweight compared to 14 percent in the cities.

Upon calculating the total number of malnutrition cases (second and third degrees) in urban areas, in heavily populated rural areas and in sparsely populated rural areas, one finds that of the 28,400 malnourished children in the country during this period, 6,000 live in urban areas, 9,000 come from heavily populated rural areas and 13,000 come from sparsely populated rural areas.

8956  
CSO: 5400

HONDURAS

BRIEFS

CONJUNCTIVITIS EPIDEMIC IN JUTIAPA--"Bacterial conjunctivitis" or "eye disease" has become a real epidemic in this region, according to Dr Alberto Herler of the Juan V. Moncada Health Center in the Jutiapa community. The disease is produced by an insect commonly known as "jejen" [gnat, mosquito], which has proliferated in an incredible fashion, endangering the health of the inhabitants, who have also been affected by malaria and dengue [tropical fever]. Dr Herler said that it has not been possible to control these insects mainly because of the neighbors' lack of cooperation in controlling the centers of proliferation. They have not cleaned lots, built latrines or taken all the hygiene measures required by this case. Public Health has started a fumigation program in all the area partly to control the proliferation of the insects that are seriously harming the health of the inhabitants of this municipality. Dr Albert Herler is appealing to the inhabitants of the place to cooperate with public health officials in destroying all the centers of infection that are breeding places for flies and mosquitoes. [Text] [San Pedro Sula LA PRENSA in Spanish 11 Aug 80 p 45] 9341

CSO: 5400

SEVERAL CHOLERA CASES REPORTED IN FARIDABAD

New Delhi PATRIOT in English 25 Jul 80 pp 1, 7

[Excerpt] With four deaths from cholera and gastro-enteritis within a week, the Ballabghar sub-division of Haryana, 35 kms from Delhi, is faced with the threat of a cholera epidemic.

The All-India Institute of Medical Sciences, which has adopted the sub-division under the Central Government's village-adoption scheme by medical colleges, has rushed a dozen doctors to investigate the cause of disease.

The situation in the AIIMS Ballabghar Hospital aggravated when the doctors found that they had run out of intravenous saline water drops, supposed to be a sheet anchor in cholera or gastroenteritis cases. [as published]

On Wednesday, senior district medical officials from Faridabad township, divisional headquarters of Faridabad district, made a hurried visit to the hospital, which has within a fortnight or so admitted about three dozens of gastro-enteritis cases, of whom two were confirmed as "positive cholera cases."

The first death from gastroenteritis occurred in the hospital on 8 July. It was a five-month-old girl, Sunita. Within five days there was another death from the same disease but it was an older girl this time though, ironically, of the same name. Another four days passed and an infant of five months, Vishal, died. The very next day it was the turn of a one and a half year old girl, Bijlani.

The doctors in the hospital were still taking it "easy." But, what alarmed them, was the death of Mrs Nathi, 50, who was also admitted to the hospital with the symptoms of gastroenteritis. Consultations among the senior doctors of the hospital ensued immediately. A death of an adult could not be taken as an "ordinary" gastroenteritis case.

Swab and stool samples of the four gastro-enteritis patients were rushed to the AIIMS, Delhi, post haste for laboratory tests. "Our clinical suspicions about the patients were confirmed when two of the four samples proved to be containing cholera "vibrio bacteria," said a hospital source, adding: "We could not take things easy now."

They got a further shock when they found one of the dead patients was a laboratory proved positive cholera case. And then two days after the death of Mrs Nathi, a four and a half year old Vishvajeet was claimed by the disease.

CSO: 5400

## BRIEFS

**INCIDENCE OF TUBERCULOSIS**--Bombay, July 19:--Nearly nine million people in India suffer from tuberculosis and about two million of them are infectious. The T.B. control programme has hardly reached a million people, according to Dr V. Ramalingaswamy, director-general of the Indian Council of Medical Research. Inaugurating a two-day seminar on "Controversies in tuberculosis," organised by the H. N. Hospital medical research society here today, Dr Ramalingaswamy said the bulk of the cases brought under the programme had "radiological shadows," suggestive of T.B. but not proven to be so. The predictive value of the shadows for T.B. was a controversy. The BCG trial was not a controversial issue, he felt. The trial was flawless. Effective technologies existed for the control of T.B. and they should be integrated into the general health services, particularly at the primary health care level, Dr Ramalingaswamy said. This required political will, adequate resources, proper managerial support, decentralisation and demystification of medical technologies. This is the fourth seminar organised by the society, and in the last seven years, it had dealt with 25 research schemes. Twelve research programmes are in progress. [Text] [Bombay THE TIMES OF INDIA in English 20 Jul 80 p 5]

**ARCOT ENCEPHALITIS VICTIMS**--Madras July 21:--Dr H. V. Hande, Health Minister, told the Legislative Council on Monday that the brain fever (encephalitis) had claimed 52 lives of children in South Arcot district. The Minister said the disease affected 75 children of the age group 2 to 13 in the district and sufficient precautionary measures had been taken. Dr Hande, who was making a statement in response to a calling attention motion, said it was found from tests that the disease was caused due to the bite of a kind of mosquito. The blood samples of the affected persons had been sent to the branch of Institute of Virology in Bangalore and they were awaiting the results for further action to be taken. Messrs. E. S. Venkatesan and C. R. Lakshmikanthan, in their motion, had urged the Government to take immediate steps to prevent the spread of brain fever. [Text] [Madras THE HINDU in English 22 Jul 80 p 12]

**CHOLERA AMONG REFUGEES--Alipurduar, Aug. 12.**--Cholera has broken out among the evacuees from the Mikir Hills, now confined to the Alipurduar junction. This has caused anxiety among residents of Alipurduar, who have complained to the subdivisional authorities a senior police official said. The refugees, however, are trickling in very small numbers now. There were no arrivals on Sunday, it was stated. No more deaths have occurred at the junction since August 4, when two people died. The subdivisional authorities have adopted measures to keep sanitary conditions from getting out of hand. The Red Cross is helping. Vigilance by plainclothes policemen continues. The evacuees are not allowed to move away from the station area. [Excerpt] [Calcutta THE STATESMAN in English 13 Aug 80 p 7]

**CHOLERA IN BIANDARA--Bhandara, August 10 (PTI).** Seven people have died of cholera in Bhandara district in the last one week, according to official reports received here tonight. Mr. S. S. Sohoni, collector of Bhandara, told PTI tonight that, of the seven dead, one was from Bhandara town and the remaining six from rural areas. Seventy-nine cases are now being treated in the newly-opened isolation ward in Bhandara town, while 152 are being treated in rural areas. Teams of doctors and workers of voluntary organisations have fanned out in the district to carry out anti-cholera measures. [Text] [Bombay THE TIMES OF INDIA in English 11 Aug 80 p 9]

**VIRAL INFECTION SWEEPS NORTH--New Delhi, 14 Sept.**--Forty people have died in the past two weeks from an unidentified viral infection sweeping the Rohilkhand region of north India, the Press Trust of India said Saturday. Quoting official reports received at the Rohilkhand District headquarters in Bareilly, 135 miles east of New Delhi, the news agency said the virus had affected more than 20,000 people, and killed 40 persons. The agency said typical symptoms of the unidentified disease were chill and high fever. The Rohilkhand region comprises several districts, most of them densely forested and notorious for hot and humid climate. NAB/UPI [Text] [Rangoon THE WORKING PEOPLE'S DAILY in English 16 Sep 80 p 6]

CSO: 5400

## Irian Malaria Victims Reported; Health Service Need noted

JAYAPURA SINAR HARAPAN in Indonesian 5 Jul 80 p 12

[text] Of the deaths reported in 1979 to the Irian Jaya Health Department Provincial Office by the Community Health Centers and clinics, 15 percent were due to malaria. Dr Suryadi Gunawan said to the ANTARA news agency last Friday that these figures were based on the official reports that have just become known. Those outside the official supervision are not yet included. The population of Irian is 12 million, and the estimate is that in the year 1979-80 only 300,000 + people have been within reach of health care services. From this he concludes that the malaria death rate is much higher, especially in the provinces that do not yet have health care. Dr Gunawan stated, that based on the reports from the provinces within reach of health care, the average number of malaria victims is more than 25 percent. He said that the most feared type of malaria, also the most frequently occurring, is tropical malaria, (*Plasmodium falciparum*), followed by tertian malaria, (*Plasmodium vivax*). There is also quartan and ovale malaria but these cases are rare. Among the 100 malaria patients at the Health Centers and clinics, an average of 60 to 70 have tropical malaria.

Based on a Health Department survey of the P4M General District, Dr Gunawan says that an Irianese living in the malaria region receives an average of 150 infectious mosquito bites per year. The lethal mosquito in this area differs from the species found in other regions of Indonesia. Through research the Sunda specie (*Anopheles Sundainicus*) was found in Java, while in Irian and Papua New Guinea one finds the Australian type which come from the group, *punctulatus*, *holiensis*, *farauti* and *bancrofti*, all of which are deadly. The alarming results of last years research in this area shows an indication of drug resistance to the medication Chloroquine. According to Dr Gunawan, this is the medication used the world over to counteract this disease. The Jayapura Health Department reports that in the first quarter of 1980, 15 percent of the malaria patients are immune to Chloroquine. In this case another alternative is to use fansider tablets or sulfa-quinine. However, doctors have warned that this could prove harmful to hearing.

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## BRIEFS

CHILDREN DIL OF UNKNOWN DISEASE--Cianjur--6 July--An epidemic, the nature of which is not yet known, broke out in the village of Sindang Laka, the Central Karang district in the Cianjur Regency. Thirty-six children died after being ill for only several days. From the information gathered by the newspaper "SH", it appears that the early symptoms are chills and fever. After this the victim coughs, and a day later becomes weak and paralysed. The children who got the disease are usually between the ages of 3 months and 14 years. [Text] [Jakarta SINAR HARAPAN in Indonesian 9 Jul 80 p 3] 9556

MEASLES CLAIM 60 LIVES--Kambing, a very small island south of Madura, reported 60 deaths and 393 others are being treated for measles. The report is that this number may increase. The age of the children who died was not included in the report. It simply stated that they were below the age of 7. In early June, this disease struck a fishing village on an island with a population of 10,254. The peak of the disaster occurred when the victims died in the fourth week of July. Two health agencies quickly sent a team of doctors to Kambing to take a survey and bring medicine and help to the people. The results of this study showed that the children who died of the measles also had further complications, such as coughing, congestion and inflamed lungs. The majority had suffered from inflamed lungs and had not received any medication. Three months ago, there was also an outbreak of measles in the eastern Sidmarjo, Pasuruan and Bondowoso Regency. A number of children under age 5 died at that time. This disease is caused by a type of virus which can be carried via air. [Text] [Jakarta KOMPAS in Indonesian 10 Jul 80 p 1] 9556

GASTROENTERITIS DECREASING IN ACEH--In the Pidie Regency (Aceh), by the third week of July 1980, 109 people suffered from gastroenteritis, five of whom have died. According to Dr Khalikul Bahri, head of Health Services for the Pidie Regency, assisted by Dr Sanusi, head of the Sigli General Hospital, and Saiful, head of the Cholera Section, said the first outbreak occurred last February when 2 of 120 patients died. KOMPAS, the newspaper, received this information during a visit to their office on 26 July 1980. Further statistics show that in March, 3 out of 98 patients died; in April, 1 out of 82; in May, 3 out of 71 and in June, 2 out of 82 died. By the end of the third week in July, 562 patients had been treated at the Pidie General Hospital and of those, 15 have died. Compared with 2 years ago this is a sharp decrease. In 1978, there were 1,475 patients treated and 70 deaths while in 1979 there were 872 patients treated and only 29 deaths. [Text] [Jakarta KOMPAS in Indonesian 31 Jul 80 p 8] 9556

BRIEFS

TUBERCULOSIS CAMPAIGN, MEASLES VACCINATIONS--Maputo Province is the scene of a vast anti-tuberculosis campaign. Radio Mozambique reported that Joao Schawlbach, provincial health director for Maputo, announced that the number of tuberculosis cases has gradually been decreasing. During the first semester of this year, 1,106 cases of tuberculosis were registered in the city of Maputo, while only 106 cases were detected in the remaining districts. Meanwhile, more than 16,000 children have been vaccinated against measles in Maputo from the beginning of the vaccination campaign. This program began last July, and the number of vaccinations against measles has been increasing. During the month of August alone, more than 11,000 children were vaccinated. The highest number of measles cases was registered in July, with the incidence of the disease decreasing in August. [Excerpt] [Maputo NOTICIAS in Portuguese 20 Sep 80 p 2]

CSO: 5400

BRIEFS

TWO GASTROENTERITIS DEATHS--Kavre, Sept. 13--Two gastro-enteritis patients of Dapcha and Banepa undergoing treatment have died, according to the doctor concerned, report RS6. Meanwhile, a few cases of gastro-enteritis have been spotted at Banepa, Panauti, Dhulikhel, Nala and Shreekhandpur village panchayats of Kavre district. However, cholera germs have not been detected in the stool of the patients, according to the doctor. (Text) [Kathmandu THE RISING NEPAL in English 14 Sep 80 p 3]

CSO: 5400

MINISTRY OFFICIAL DISCUSSES ANTIMALARIA PROGRAM

PA241910 Managua Sistema Sandinista Television Network in Spanish  
0200 GMT 24 Sep 80

[Text] The Health Ministry will implement a vast emergency plan to fight malaria in our country in the next few days. Companero Rene (Darce), who is in charge of the ministry's preventive medicine department, announced.

[Begin recording] The Health Ministry is making huge efforts to control this disease, one of our country's most serious health problems. In our efforts to fight this disease, we have tried to use all the resources available. We have sought ties with the mass organizations and have made use of the national literacy crusade to make crusaders work to control this disease.

Malaria represents a serious problem in our country because in the past it had been totally neglected. During the liberation war, the program's funds were used to repress the people. The [word indistinct], the instruments were destroyed (?during a raid) and now we are [word indistinct] that malaria should become a serious problem.

We want to make people aware that we will have a high incidence of malaria this year because, unfortunately, whenever these programs are suspended for a time, the number of cases greatly multiplies.

The Government of National Reconstruction has given top priority to this program and the Health Ministry has given top priority in 1981 to the malaria programs. We have tried to [word indistinct] and detect the areas where there is the highest incidence rate and we have detected 70 percent of the malaria cases in Ch'ndega, Leon and Managua. So most of our resources will be used in those places in an effort to effectively control this problem.

[Question by unidentified speaker] Companero, how will the ministry try to fight malaria?

[Answer] We will try to fight the carrier, the anopheles mosquito. We will spray houses in the most affected areas with insecticides that affect this type of mosquito because the anopheles mosquito has built up a resistance to a large number of insecticides. We will also provide systematic treatment for all those persons (?affected by the disease) in places where malaria is frequent, that is, in Leon, Chinandega and Managua. We will declare an emergency zone in the neighborhoods located on the shores of Lake Managua because that is where we have found the highest incidence of malaria. [End recording]

CSO: 5400

BRIEFS

**CHOLERA, RABIES MEASURES**--The Epidemiological Unit of the Ministry of Health, in Obudu Local Government area of Cross River State has innoculated a total of 1,845 persons against cholera. The innoculation followed recent reports of the outbreak of the disease in Anambra State. Mr. Columbus Ugar, the Higher Rural Health Superintendent incharge of the Unit, told newsmen in the area that he was satisfied with the encouraging turnout of members of the public for the innoculation. He, however, regretted that the exercise could not be carried out in the rural areas because the vaccine was in small quantity. But he promised that, as soon as a new consignment of the vaccine arrived from the headquarters, the unit will extend the exercise to the rural areas. The superintendent advised those within the urban who did not benefit from the first exercise, to come forward and guard against its epidemic. Another report from the area, said that mass anti-rabies innoculation of dogs has also begun there. The exercise is caused by the recent high incidence of dog bites in the local government area. A notice issued from the Veterinary Division of the Ministry of Agriculture and Natural Resources in the area advised dog owners, to take their dogs to the veterinary clinic for innoculation. The notice warned that anybody who violated the instruction would be at his own risk, adding that the need for the innoculation was in order to arrest the situation of dog menace. [Text] [Kaduna NEW NIGERIAN in English 6 Sep 80 p 3]

**GUINEAWORM APPEAL**--We the people of Mgbo Agbaja and Agbaja and Abofia in Abakaliki Local Government wish to appeal to Anambra State Government, especially Governor Chief Jim Nwobodo to please use his good offices to make boreholes available for us. This should be situated at Ekengbo Community School, Abakaliki. For a long time we have been suffering from this dangerous disease--guineaworm, and up-to-date no improvement whatsoever because of lack of pipe-borne water. Good water is one of the nesential ingredients of life and we have been for years left without it. We only have available contaminated pond and stream water which are very dangerous to health for human consumption. The worst part of this disease (guineaworm) is that it does not keep a dam to affect human being in any part of the body [as printed]. The funnest, I have witness between January to April this year more than 90 males who suffered from guineaworm disease in their testis and 79 females in their breasts, not to talk of others who suffered

in their legs, hands, bottom, abdomen, back etc. [as printed]. Even a friend of mine suffered same disease in her private part. I myself suffered same more than five times this year but on my legs. We urgently need boreholes water for drinking so as to rescue us from water borne disease. We also like to seize this opportunity to appeal to the authority concerned to construct a road to Ekengbo Community School, Abakaliki. I believe the authority concerned will now appreciate to note that the correct distant from Abakaliki township to the said school is only two miles and not eight kilometres as was published in the New Nigerian Newspapers of 2nd August 1980. May I seize this opportunity to give immense thanks in advance to Anambra State Government for urgent attention which will be appreciated. [Letter by Uhopu Chief Nwaogbaga] (Text) {Kaduna NEW NIGERIAN in English 10 Sep 80 p 4}

CSO: 5400

SOUTH KOREA

CHOLERA EPIDEMIC SPREADS TO PUSAN, KWANGJU

Country Under Quarantine

SK240134 Seoul HAPTONG in English 0115 GMT 24 Sep 80

[Text] Seoul, 24 Sep (HAPTONG)--The number of cholera cases increased to 53 as the water-borne epidemic struck four more densely populated areas including Pusan and Kwangju, capital of South Cholla Province, as of Sunday. The latest outbreaks were five cases each in Pusan and Kosong, South Kyongsang Province, and four each in Kwangju and Koksung in South Cholla Province where 29 cholera patients were first reported last Thursday. Two of them have already lost their lives. In addition, Seoul has four patients and the North Cholla Province township of Tonchang two persons, all isolated in hospitals as confirmed cholera cases.

The Health and Social Affairs Ministry, which already placed the whole of the country under quarantine last week, took additional anti-cholera precautionary steps that included temporary shutdown of restaurants serving "naengmyun" (the buckwheat noodles served with raw fish and ice). Also banned under the precautionary steps were the practice at restaurants of serving wet serviettes. Travellers to and from the cholera-infected areas and all the inhabitants in the areas were ordered to receive compulsory anti-cholera vaccinations.

Meanwhile, the Seoul Municipal Board of Education today instructed all the schools in the capital not to organize their annual autumn sports meets, study tours and other school events until after November.

Outbreak Linked to Seafood

SK240836 Seoul HAPTONG in English 0816 GMT 24 Sep 80

[Text] Seoul, 24 Sep (HAPTONG)--The health authorities investigating to determine the cause of cholera outbreaks said today they discovered the germs of the water-borne disease in marine products on sale in Mokpo, a port city on the southwest coast about 250 miles south of Seoul. The sea foods found carrying cholera germs were octopus, flat-fish, hair-tail, shrimp, clam, crab and eel, all caught recently off the southwest coast.

The authorities have already issued a total ban on fishing operation off the coast last Thursday when the first outbreak of cholera infected 29 persons in the port city and its neighbouring Sinan County, killing two of them.

As of today, 18 primary or middle schools went into temporary recess in both South and North Cholla Provinces because of ever-spreading cholera.

## RABIES KILLS FOUR IN KITWE

Lusaka TIMES OF ZAMBIA in English 16 Sep 80 p 1

[Text]

FOUR people have died of rabies in Kitwe in the past eight weeks, Copperbelt provincial veterinary officer, Dr Foster Mungaba, confirmed in Ndola yesterday.

Dr Mungaba said the department had mounted a massive campaign to vaccinate dogs, but the exercise was being hampered by lack of vaccines.

The province has had no vaccines for a week although drugs were expected in the country two weeks ago.

He said Kitwe was badly affected by the rabies and a tie-up order had been imposed.

He said the first case was reported eight weeks ago and the latest victim a child, died at Kitwe Central Hospital last week.

Meanwhile, one person has been admitted to Mbala General Hospital suffering from cholera bringing to five the number of patients treated against the killer disease since the beginning of August.

Mbala General Hospital medical superintendent, Dr Monica Ihli, confirmed this yesterday in a telephone interview from Kasama.

Dr Ihli said three people had suffered from the disease last month. They were discharged after treatment while two others have been treated this month.

She could not, however, give the condition of the patient, but only warned that cholera was always a dangerous disease.

Unconfirmed reports from Nsumbu along the shores of Lake Tanganyika say that two people have died in a fresh outbreak of cholera in the area.

No one was available for comment from the provincial

medical officer's office in Kasama.

Travellers from the area said they had been vaccinated against the disease while there.

This is the third time that the killer disease has broken out in Northern Province since 1978 when 36 people died in Mbala and Kaputa districts.

The disease was again reported in January this year when 21 people died within two weeks in Kaputa.

Health Ministry acting permanent secretary, Dr Winford Lungu, has not received a report of a fresh outbreak of cholera in the Nsumbu area.

He said in Lusaka yesterday that health officials from Kasama were in the capital yesterday and did not say anything about the disease.

CSO: 5400

BRIEFS

CHOLERA REPORTS PROBED--The Ministry of Health has dispatched a medical team to the Northern Province to investigate reports of a cholera outbreak. Acting permanent secretary Dr Winford Lungu, said in Lusaka yesterday the ministry had sent out medical supplies to treat and prevent cholera cases. He was commenting on reports that two people have died from the killer disease while two others were receiving treatment at Mbala general hospital. According to area governor Mr Amon Ntinda, about seven cases of cholera had been reported to his office by hospital authorities in Mbala. Dr Lungu said he had heard about the reported deaths through the Press and was not sure if anyone had died from the disease or not. He said the ministry had sent out the medical team to ascertain whether there was cholera in the area or not. It was possible that these were suspected cases of cholera which could be various forms of diarrhoea. "There are various forms of diarrhoea and I cannot comment on whether the reported cases are cholera or not until I have a report based on laboratory tests," he said. [Text] [Lusaka TIMES OF ZAMBIA in English 20 Sep 80 p 5]

CSO: 5400

## ANTIMEASLES DRIVE IN MASHONALAND

Salisbury THE HERALD in English 19 Sep 80 p 11

[Text]

TWO medical teams from the Save the Children Fund are helping the Mashonaland medical authorities to vaccinate children against measles in remote areas which were not reached during the war.

The teams, each of two state registered nurses, a medical assistant and a driver, are working under the Provincial Medical Officer of Health in the north of the country.

The PMOH, Dr Peter Bang, said yesterday one team had been based at Muhamubi Pools in the Zambezi Valley since June and the other in the Omay Tribal Trust Land near the Matusadona Game Reserve.

"They are doing a very good job and the Zambezi Valley team did over 5 000 jabs of all sorts during June. This is a fairly sparsely populated region, but there was obviously a large number of non-immunised children because of their inaccessibility during the war."

Government community health nurses were also involved in the campaign.

Very often people would

not come forward for vaccination for religious and other reasons. However, his office had had no reports of the disease "in the last month or so".

Dr Bang said Mashonaland did not appear to be so badly affected by measles as the rural areas of Matabeleland, as reported by the PMOH in Bulawayo. Dr Alan Pugh, in yesterday's Herald.

The position was definitely not as serious as in the outbreak at the beginning of the year. "It is not bad to the extent that I would be too disturbed about it," said Dr Bang.

"There is always a seasonal upsurge in measles and that was at the beginning of the year.

"The position was aggravated by the influx to town of a lot of non-immunised children — refugees — who mingled with infected children, were infected, and so it was passed on."

Dr Bang said the immunisation programme was a continuing exercise to keep one step ahead of the spread of the disease.

CSO: 5400

MEASLES EPIDEMIC IN MATABELELAND REPORTED

Salisbury THE HERALD in English 18 Sep 80 p 9

(Text)

BULAWAYO.

CHILDREN were dying of measles in all rural areas of Matabeleland, the Provincial Medical Officer of Health, Dr Alan Pugh, said here yesterday.

"We do not get the figures because measles is not a notifiable disease. But everywhere I go I hear that children have died."

Many Bulawayo people have been treated for the disease.

The fact that some children who had been immunised against measles yet still contracted it did not surprise him.

"This is nothing new," he said. "The vaccine is not 100 percent effective. Even the makers claim only 90 percent effectiveness."

"An additional factor is that in our hot climate vaccine sometimes loses its potency. I would say 3-10 percent of the children with measles have been vaccinated." There was no set age group in which the immunity was

not effective. Some children were vaccinated years ago, others were vaccinated recently, he said.

"We have an immunisation campaign going in almost all districts. I leave it to the nursing sister in each district to revaccinate children where she feels this should be done."

Wherever several "vaccine failures" occurred in one area, children were revaccinated, he said.

Dr E. F. Watson, Bulawayo's Medical Officer of Health, said he was probing the problem of immunisation failure in measles cases in Bulawayo. "We are getting a number of cases of children who have been immunised.

"Measles vaccine is a live virus, and very delicate. If transportation and storage is not carefully supervised, if the vaccine is not used as the makers stipulate and is not stored as they recommend, it can be ineffective. I am going into this matter myself," Dr Watson said.

A factor that might have a bearing on immunisation failure was that at one stage during the bush war because of the high cost of vaccine to the previous government only one-third of the normal dose was administered. Experiments and tests showed that this conferred satisfactory immunity, Dr Watson said.

"We stopped that two years ago, and resumed full doses. But last year we had the biggest outbreak this country has had. Because we had such huge numbers — 7 000 in the council's area alone, we could not investigate them. We do not know whether some were from outside Bulawayo."

The number of measles cases in Bulawayo at present was not "overwhelming", he said. "We have about 60 in our Thornicroft Hospital, whereas at this time last year we had 160."

CSO: 5400

GRAVITY OF MEASLES EPIDEMIC, OTHER DISEASES REPORTED

Salisbury THE HERALD in English 25 Sep 80 p 13

[Text]

BULAWAYO.

**AN MP for Matabeleland South, Mr Stephen Nkomo, said in Bulawayo yesterday the Kezi area is in the grip of drought, and many children had measles and bilharzia.**

"Hundreds of children have died, and many more will die unless the Provincial Medical Officer of Health can arrest the measles epidemic. Antelope Mine hospital should be reopened," he said.

The disease was most active in the Shashani area.

At Kezi primary school at least 100 children had bilharzia, he said.

There was a grave lack of water for humans and animals. Some boreholes destroyed during the war were still not functioning "notwithstanding efforts by the department concerned".

"Much remains to be done to provide water in the area," he said. The drought, and loss of grazing had caused hundreds of cattle deaths.

"Unless the Government buys some land in the area for resettlement, the future for these people is gloomy indeed."

The programme of supplying seeds and other agricultural items was in progress, but the problem of providing the people with building material "had not been touched", he said.

"People who lost their homes in the war are doubly affected. They need homes and agricultural help."

When people were given seed, fertiliser, and ploughs they should also be supplied with building material, he said.

He had spent several recent weekends in the Matobo area, meeting people, viewing projects and assessing problems.

He had urged the people to take advantage of Devag's seeds and farm-aid distribution programmes.

Devag was sending field teams to all rural areas and was working closely with political party officials.

"The Roads Department appears to be carrying out its programme satisfactorily," he said.

CSO: 5400

LOSS OF CATTLE DUE TO TICK EPIDEMIC REPORTED

San Jose LA NACION in Spanish 11 Aug 80 p 16 A

[Text] The Ministry of Agriculture and Animal Husbandry (MAG) has reported that, during the last 12 months, ticks have caused cattle losses estimated at some 69 million colones.

A study made by that organization reveals that this acarus, which is barely between 4 and 6 mm long, affected 282,683 heads of cattle and the losses stem from the decrease in meat and milk production as well as from the devaluation of the leather because it is damaged by the small animal.

It was learned that ticks produce high mortality among adult cows of select breeds imported annually, because this type of cattle is very susceptible to anaplasmosis and piroplasmosis, diseases produced by this acarus.

It was learned that 13 million colones were spent during this period to control the small animal through the use of baths with tick-killing liquids; a considerable sum was also spent for medicines to cure clinical cases of anaplasmosis and piroplasmosis.

Experiment

The MAG also said that in an experiment carried out during the development of the tick control project headed by Dr Edwin Perez Chaverri, a "validation," or control test with periodic baths every 21 days was done with 10 milch cow herds in San Isidro de Coronado. It was concluded from the test that spray baths every 21 days are more than enough control for milch cow herds of this area, as long as the task is well done.

Control

The ministry added that the veterinarians working in the control program have considered the need to find the cheapest and most efficient methods to achieve that goal.

According to MAC, it was determined through a study that 96 percent of the country's cattle region is infected with ticks, while some areas are free of the disease because of ecological reasons, including heights of more than 1,000 meters above sea level and temperatures below an average of 15 degrees.

The diagnostic laboratory that has been installed has enough equipment and human resources to provide efficient diagnostic services and cooperate in the solution of the epidemiological problems of ranches and regions.

9361

CSO: 5400

## SLOW BREEDING, DISEASE CAUSE GEORGIAN LIVESTOCK DECREASE

LD221325 Tbilisi ZARYA VOSTOKA in Russian 4 Sep 80 p 1

## (Article: "Overcoming Shortcomings")

[Text] As is shown by data from the republic's Central Statistical Administration, on farms in many rayons in the republic the rate of increase in livestock numbers has fallen in recent years. In the first 7 months of the current year alone calving and calf survival indicators have been allowed to fall on farms in 30 rayons in the republic. Things are particularly bad in this respect in Kedokiv, Kobuletskiv, Samtredskiy, Tlmenetskiy, Kvarelskiy, and Tskhinvali rayons. The lambing rate has fallen sharply on farms in Adigenskiy, Kaapskiy, Marmulskiy, Onakiv and other rayons. The farrowing rate in the same period is down from last year's, thus the number of pigs produced per breeding sow has decreased by 1.62 in Aspindzskiy Rayon, 1.05 in Akhalaikhskiy Rayon, 1.84 in Adigenskiy Rayon, 1.84 in Adigenskiy Rayon, 1.14 in Borzhomskiy Rayon, 2.02 in Mtskhetskiy Rayon, 1.38 in Dushetskiy Rayon, 1.27 in Leningorskiy Rayon, and 2.94 in Znauriskiy Rayon. This list could be continued.

There has been an increase in barren among cattle on farms in Adigenskiy, Tsulukidzevskiy, Vaniski, Tsetatskischi, Onakiv and Ambrolauriskiy rayons, among hogs on farms in Aspindzskiy, Karelakiy, Borzhomskiy, Gardskanskiy, Tetritskaravskiy, Marmulskiy and Novakovskiy rayons and in the Abkhazskaya ASSR, and among sheep and goats on farms in Gorlyskiy, Gurdzhaanskiy, Signashskiy, Telavskiy, Marmulskiy and Tsageriskiy rayons and in the Yugo-Osetinskaya Autonomous Republic.

Commenting on these data, Doctor of Veterinary Sciences K.S. Kapanadze, chief of the veterinary sector of the Georgian Zootechnics and Veterinary Teaching and Research Institute, told a GRUZINFORM correspondent:

"In recent years, particularly since the 18th Georgian CP Central Committee Plenum, a great deal of work has been done in the republic to further develop the livestock raising sector, increase livestock productivity and to strengthen the flocks base. Among some comrades, however, the initial successes led to a sense of complacency and a lackadaisical attitude. This criticism applies chiefly to specialists at kolhiz and sovkhoz livestock units and interfarm enterprises. For example, is the high incidence of barrenness in many kolhiz and sovkhoz public-sector herds not indicative of considerable shortcomings in their work?"

Comrade L.I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the USSR Supreme Soviet Presidium, spoke about the harm this is doing to public-sector livestock raising at the conference at the Kazakhstan CP Central Committee. "More attention," he said, "must be paid to qualitative livestock raising indicators. One gets

the impression that some writers have become accustomed to low livestock productivity and to abnormalities in livestock reproduction. I am referring to the low rate of young stock production.... Proof of the enormous harm this is doing to breeders and stockmen, not alone to the state, is necessarily required. Remember the past. If a peasant's cow failed to produce a calf, it was a great misfortune and a terrible blow. This animal must not be allowed to remain in such a state."

The Republic is supplied with pedigree stock every year, but on the overwhelming majority of ranches and gardens breeding work is developing too slowly and frequently only with sterility.

It is particularly intolerable that many farms are allowing hermaphrodites to occur among livestock. Specialist livestock engineers and veterinary writers must organize the introduction of the effective measures for breeding and feeding livestock recommended by scientists.

CSO: 5400

## WAR DAMAGE TO CATTLE, DISEASE CONTROL REPORTED

Salisbury THE HERALD in English 22 Sep 80 p 5

(Text)

**THE disruption of dipping services, the consequent tick-borne disease epidemics in tribal areas and the deaths of about a million cattle in Zimbabwe in the past seven years were the most dramatic effects of the war on livestock disease control.**

He wrote three veterinary officers with the Government Veterinary Research Laboratory in Salisbury in a July edition of the London-published weekly, *The Veterinary Record*.

The article — The effects of war on the control of diseases of livestock in Zimbabwe — was written by the Assistant Director of Research, Dr John Lawrence, Dr Chris Poggin and Dr Andy Norval.

At the outbreak of the war in the north-east of the country in late 1972, veterinary services were disrupted over "a steadily increasing area", though the mainly white commercial farming area was not seriously affected.

At that time, as the result of effective veterinary policy which was formed after the successful enforcement of stringent regulations to control East Coast fever, the national herd had increased a hundredfold from the beginning of the century, to six million.

With the war compulsory weekly cattle dipping in the summer and

fortnightly dipping in the winter was by the board.

"Other measures to be affected . . . included the routine vaccination of dogs against rabies and the control of outbreaks of foot-and-mouth disease and anthrax. The effect on the incidence of disease was dramatic," the article said.

"It has been estimated that approximately one million cattle, nearly one-third of the number known to have been present in the TTE in 1973, died of tick-borne diseases between 1974 and the end of 1979.

An efficient control policy for the regular outbreaks of foot-and-mouth disease in the south, south-east or north-west of Zimbabwe was evolved for commercial ranching and tribal areas.

"The efficiency of the policy achieved international recognition and Rhodesian beef enjoyed access to sophisticated world markets."

Attempts to control an outbreak in the south-eastern lowveld in March 1977 was hampered by the

activity of nationalist forces, "and the situation was compounded by failure of the vaccine in use to provide adequate immunity".

Control of the disease was only achieved with the availability of an effective vaccine after previous attempts had to be abandoned and the disease spread "up to 450 km from the initial focus", said the article.

Though serious losses were not encountered, the infection "played havoc" with the movement and sale of cattle and endangered beef exports.

An outbreak of the fatal disease, anthrax, in the west of the country early last year spread rapidly till by the end of the year, it was estimated to be active in about one-third of the tribal areas of Zimbabwe.

"Vaccination prevented infection in commercial farming areas and only four outbreaks, with 11 cattle deaths, have been reported so far.

## FATALITIES

The increase in incidence of anthrax in humans has been dramatic. In 1970 a total of 4008 cases was diagnosed, 63 of them fatal," the report said.

Previously control of outbreaks of anthrax frequently discovered first in humans, had been vigorously implemented with carcasses being burnt or buried and all live-stock in surrounding areas vaccinated. The movement of animals or livestock products was prohibited.

"These measures successfully limited the disease and the annual average anthrax toll of cattle until 1978 was approximately 20 animals," the article said.

Only 21 people died out of 174 reported cases of anthrax in humans in the 28 years until 1978.

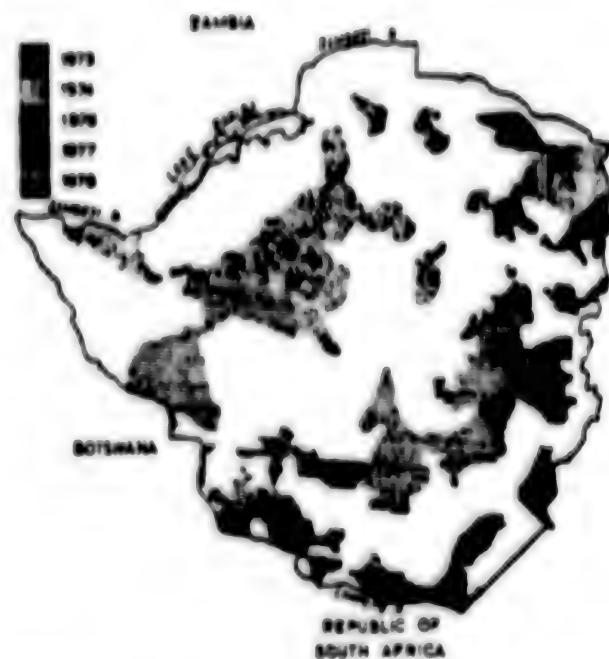
With the re-introduction into the country in 1959 of rabies from the Transvaal and the then Bechuanaland Protectorate control measures including the quarantine of infected areas and the destruction of stray dogs were implemented.

In 1951 regular compulsory vaccination of dogs began and in 1960 only seven cases of the disease were confirmed, all of them in dogs.

The halving of the number of dogs presented for vaccination caused by political unrest early in the 1960s increased the incidence of rabies and by 1965 the disease was firmly established in wildlife particularly jackals, the report said.

Good control had been re-established by 1975 but with an escalation of the war the following year "the few vaccination campaigns that were mounted in tribal areas were done at great risk to both the operators and those willing to protect their dogs".

In 1975, nearly 334 000 dogs were vaccinated, this number falling to 78 000 last year, the majority in towns. A record number of 281 cases of the disease was confirmed, 175 in un-injected dogs.



THE map shows areas where regular dipping has broken down and the year in which it did so.

## MATCHED

The report says the position of the disease "now closely matches that of 1954, before the disease was brought under control".

The ability of the Department of Veterinary Services to administer prophylactic drugs to control the tsetse fly-carrier disease of trypanosomiasis made it possible to keep cattle in areas of "high disease challenge".

After the replacement as a control measure of the shooting of the disease's natural game hosts by ground insecticide spraying in the 1960s, "it was possible in the early 1970s to look forward to the day when trypanosomiasis would be eliminated from the country," said the article.

"From 1972 the operations of tsetse-spraying teams and veterinary in-

spectors became progressively more dangerous as a result of the war and in one district after another they were abandoned.

"The disease position deteriorated and cattle deaths escalated."

The article concluded that with the return of peace and political stability to Zimbabwe, veterinary services had to be restored in the tribal areas.

The tick-borne disease problem is the most difficult to tackle. Rebuilding dip tanks and re-introducing regular dipping is essential if the present outbreaks are to be halted.

However, the lesson learned over the past five years must be remembered and a new approach to the control of tick-borne diseases which results in a stable situation, not prone to disaster, will have to be evolved."

PLAQUE OF LOCUSTS THREATENS WEST AFRICA

Addis Ababa THE ETHIOPIAN HERALD in English 19 Sep 80 pp 3, 6

[Text] Accra (Agencies)--The worst plague of locusts to hit Africa for 40 years could devastate crops across several West African countries in the next few months, according to experts tackling the problem.

Mr. Herbert Alobenu, Director-General of the International African Migratory Locust Organisation said civil war in Chad was hampering efforts to control the locusts now covering 400,000 square kms. in Chad, Cameroun and Nigeria.

He said in an interview that the civil war, which began in February 1979, made it impossible to attack the locusts' breeding grounds in the Lake Chad basin.

It is the second time in three years locusts have spread uncontrolled because of an African war. In 1977-78, a plague of desert locusts hit the Horn of Africa. On that occasion, it was the war of aggression in the Ogaden unleashed by Somalia which delayed effective control.

Locust experts say the latest plague could have catastrophic effects on the agriculture of several sub-Saharan countries.

"So far there has not been any major impact on crops because the locusts have largely been in areas where ranching predominates. But we forecast that later this year the north-east Harmattan winds could blow the locusts through southern Nigeria, Benin, Togo and Ghana," Mr. Alobenu said.

"This would lead to very important crop damage and food shortages.

He said that at present the plague was comparable in size to that which affected the Horn of Africa three years ago. But he added that it would definitely get worse and could be considered the worst outbreak the continent had seen since the plague of 1928-1941.

That plague started in Mali. It spread from the Atlantic to the Indian Ocean and down to South Africa, leaving widespread famine in its wake.

In June Mr. Alomenu's organisation known as O.I.C.M.A. after its French initials appealed to the international community for emergency aid to combat the advancing locusts.

So far O.I.C.M.A. has collected 800,000 dollars, still far short of the two million dollars it will need over the next six months alone.

#### Appeal for Funds

At a meeting in Ghana earlier this month OICMA renewed its appeal for funds, for large-scale locust fighting machinery.

The locust fighters will have to carry out their spraying operations against the insects in Cameroun and Nigeria.

"The most important area where breeding is going on now--Lake Chad--we just cannot enter," said Mr. Alomenu.

The war has destroyed the apparatus set up in Chad to monitor locust movements. Mr. Alomenu said that troops had taken over the office in N'Djamena at Oclava, a sister organisation also concerned with locusts. The locust threat comes at a time when almost all West African governments are putting great stress on increasing food production. Ghana, for instance, launched a two-year programme in May to make the country self-sufficient.

According to Mr. Alomenu, the locusts could jeopardise the agricultural programmes of several West African countries.

President Hilla Limann of Ghana said in an interview that he was very concerned about the locust threat.

The 46-year-old President said he had been born in terrible famine years caused by the locust plague of the 1930's, and had seen for himself the destructive power of locusts.

Mr. Alomenu said the crucial months would be between now and December. The locust fighters will attempt to spray as much land as possible to reduce the threat when the Harmattan winds began.

Most of the spraying so far has been carried out in the massif de L'Adamaua in Central Cameroun and in the Cameroun highlands across the border in Nigeria. Special locust-proof helicopters are being used.

But despite the control operations, the area infected has grown ten-fold in the past year

The United Nations Development Programme (UNDP) and Food and Agriculture Organisation (FAO) are the main bodies financing the drive against the locusts.

CSO: \$400

BRIEFS

MULTICOUNTRY POTATO BACTERIA STUDY--Our country will head the study and research project involving the "Erwin" bacterium, known as "black leg," which is causing great losses in potato production. We have been told that this action was taken pursuant to one of the agreements reached at the conference on bacteriosis in the cultivation of potatoes which was held in Costa Rica a few days ago with the participation of specialists from the Dominican Republic, the United States, our country and the International Potato Center (CIP), which has headquarters in Lima, Peru. This project will be carried out by the Dominican Republic and Costa Rica and, among other things, proposes to organize a plan whose objectives will permit in-depth familiarization with the disease and development of suitable technologies for the prevention and control of "black leg." It is learned that the objectives of the investigation are: to identify the varieties of this bacterium which causes great damage to crops, to analyze its capability of surviving in the ground, as well as the effects of transmission by seeds and insects in the development of the disease; to determine what correlation exists between the rotting potential of the seed and the disease in the fields; and to offer training to personnel of countries which are members of the Regional Potato Cooperation Program (PRECODEPA). It was said that this study will make it possible to build a solid base of regional scope to control this disease, which represents a danger for the economy of the countries with this problem. [Text] [San Jose LA NACION in Spanish 13 Aug 80 EL AGROPECUARIO Supplement p 9C] 8143

GUATEMALAN-MEXICAN RUST CONTROL--Edgar Ponciano Castillo, minister of agriculture, has reported that on 12 August in the city of Tapachula, Mexico, a document will be signed which will facilitate actions taken to combat coffee rust. This document complements an agreement and accord signed jointly by Guatemala and Mexico for the purpose of taking effective measures to control coffee rust. Ponciano Castillo said that the ceremony for the signing of this document will be attended by himself, officials of the National Coffee Association and other officials responsible for the program, on behalf of Guatemala. Mexico will be represented by Francisco Merino Rabago, secretary of agriculture and livestock of the Mexican Government and other officials from that country's coffee sector. [Text] [Guatemala City DIARIO DE CENTRO AMERICA in Spanish 11 Aug 80 p 8] 8143

GUATEMALA-SALVADOR RUST MEASURES-- The coffee rust disease is 40 km away from the Guatemalan-Salvadoran border, said Agriculture Minister Edgar Ponciano. He admitted that the fight against the disease is related to the political problems of El Salvador. [Begin recording] We have adopted all measures in the book, so to speak. The quarantine posts have been fumigated. Fumigations have been intensified and a 2-km zone has been established near the Salvadoran-Honduran border, which is totally free of coffee rust disease [word indistinct] 60 technicians from the Agriculture Ministry and from the technical division of the National Coffee Association. We also have received aid from the Mexican Government in accordance with the Mexican-Guatemalan coffee rust agreement. These are the measures we are adopting here in Guatemala; the regional international organization for plant protection and animal health is adopting measures at the Central American level. In El Salvador, the coffee rust problem is basically connected with politics. Until the Salvadoran Government and people solve their political problems, it will be very difficult to resolve their agricultural problems, among them coffee rust disease. This is because few enterprises are being developed, and no one is responsible for the coffee plantations. So until the government and the banks give their full support the Salvadoran coffeegrowers, the growers will not be able to do much. [end recording] [Text] [PA251945 Guatemala City Radio-Television Guatemala in Spanish 0400 GMT 25 Sep 80]

CSO: 5400

AGRICULTURE MINISTER'S PERFORMANCE CRITICIZED

PA222139 San Jose Radio Reloj in Spanish 1730 GMT 22 Sep 80

(Station Editorial)

[Text] The monilia epidemic has forced the President of the Republic to declare Limon Province an emergency zone. In other words, we have been fighting a disease for 3 years, but instead of controlling it, it is on the rise, making it necessary to adopt emergency measures.

The monilia was quickly detected and a control policy was quickly implemented. So what happened? Why is the disease still not under control? Why are we worse off than before?

It seems that with the sigatoka epidemic, things are just as bad. It is advancing in similarly dangerous fashion.

We are an agricultural country and we cannot fail to understand that agriculture is an essential and basic part of our economy. Agricultural epidemics and diseases must be considered more seriously. Apparently, when sigatoka first appeared, only a small zone in San Carlos was affected and it looked as if it would be easy to detect and control it. At the time, it was announced in Panama, but not here in Costa Rica, that the sigatoka epidemic affecting our country was attacking only plantains. Now, however, sigatoka has spread to almost the entire Atlantic zone and has become a veritable headache.

Of the agriculture ministry we can say it has had to import beans, that it has been unable to control sigatoka and that it is equally unable to control monilia. In other words, it has a long series of failures which very obviously have affected the national economy. The agriculture ministry is doing very badly. It began very badly and it is still doing very badly.

We voice our very strong protest over the manner in which the agriculture minister is handling matters that are very important and essential to this country.

COSTA RICA

BRIEFS

MONILIA THREAT DISAPPEARING--The serious threat to cacao production represented by monilia has almost disappeared as the result of techniques used by MAG [Ministry of Agriculture and Livestock] officials to combat this disease, according to Dr Hernan Fonseca, minister of agriculture. He said that during his recent visit to the Atlantic region where there are 300 hectares of cacao belonging to the MAG, he was able to observe that monilia had been largely brought under control as the result of the destruction of diseased plants, spraying and other measures taken. He said that the methods used by MAG to combat this disease have helped to dissipate the fears of farmers. He added that if the hectares infested by monilia at present are freed of this disease the country could produce the 9,000 tons of cacao it was producing before monilia made its appearance and that in about 3 years a production of 20,000 tons could be reached. He said that the principal problem standing in the way of attaining this objective is the lack of credits from the National Banking System. Dr Fonseca said that because of the lack of credit for the control of monilia, he had spoken with Naranjo Coto, executive president of the Central Bank, who offered his support in helping to obtain funds to be used for this purpose. According to Dr Fonseca, this would be in the neighborhood of 40,000 colones for the 1980-81 period. [Text] [San Jose LA REPUBLICA in Spanish 13 Aug 80 p 5] 8143

BANANA DISEASE UNDER CONTROL--Based on a study carried out by the Agriculture and Livestock Ministry's Forest Sanitation Department, Hernan Fonseca Zamora, agriculture and livestock minister, reported that the virulence and speed with which the black sigatoka was spreading has been controlled. He said that one can live with the disease if properly controlled. Minister Fonseca Zamora said the campaign to control black sigatoka has been coordinated with the banana companies and that they have asked the Public Works and Transportation Ministry to repair airfields in Huapiles, Guasimo and Rio Frio so they can continue fumigating the plantations with the small planes they are using now, instead of having to use larger ones, which have to take off from larger airfields. [Excerpts] [PA300339 San Jose Radio Reloj in Spanish 0100 GMT 30 Sep 80]

RUST AFFECTING SUGARCANE PRODUCTION--Since sugarcane rust appeared in Costa Rica a year ago and is affecting the product's commercial production, the San Carlos area, where the fungus was discovered, has been chosen to carry out an investigation aimed at determining which hybrids resist the disease. This site was selected, we have been told, because it offers the best conditions for the growth of sugarcane rust on susceptible varieties. According to our information, the propagation of the disease has been particularly favored in the following varieties: B 50-135, H 59-37-75, H 58-43-92 and H 37-1933. Engineer Franklin Aguilar, a sugarcane expert, said that those varieties are found in San Carlos and that, for this reason, that area has been hardest hit by rust, particularly the 43-62. He went on to say that the Grecia and Turrialba cane fields have been less affected and that rust has begun to attack hybrids H 37-1933 and B 50-135, which are planted by many farmers. He stated that the following varieties have shown greater tolerance to rust: Pindar, H 44-30-98, Q 68, NCO 3-10, B 51-129, H 57-51-74 and B 50-377. "It is recommended," he added, "not to plant the varieties which are susceptible to the disease, since fungicide control is uneconomical." [Text] [San Jose LA NACION in Spanish 20 Aug 80 EL AGROPECUARIO Supplement p 7C] 8568

CSO: 5400

EL SALVADOR

COFFEE RUST SPREADS THROUGHOUT COUNTRY

PA231524 San Jose Radio Reloj in Spanish 1200 GMT 23 Sep 80

[Text] Costa Rican Agriculture Minister Hernan Fonseca Zamora has reported that he received a call from Carlos Hueller, director of the Regional International Organization for Plant Protection and Animal Health (OIRSA) in El Salvador, to report that the dreadful coffee rust disease has invaded all coffee plantations in that country.

The rust spread from the western to the central region and then on to the east part of the country up to the border with Guatemala.

The disease surpassed the plant quarantine barriers that OIRSA had installed in El Salvador, Fonseca Zamora added. It can be said that the rust is already spread throughout the country's coffee fields.

The minister announced that the government is taking quarantine measures. He noted that these measures include strict control over plantations, warehouses and any transportation of grain from El Salvador. This is being done to keep the rust from spreading to neighboring countries such as Guatemala and Honduras, the countries most threatened by it.

He said that we must be especially careful now at coffee picking time, adding that constant vigilance should not be neglected.

He noted that the government is conducting a continuous inspection of the country's plantations. Fonseca Zamora said that the measures are stricter now in order to exercise a greater control.

There are many people working in the coffee plantations now because of the harvest season so any outbreak would affect us directly. The inspection for this disease must be more thorough because there is more danger that this fungus will spread with the humidity of the rainy season, the minister concluded.

CSO: 5400

GUATEMALA

BRIEFS

COFFEE DISEASE CONTROL MEASURES--The Guatemalan authorities have ordered three measures carried out immediately to prevent the coffee rust disease from spreading from El Salvador into Guatemala, Jorge Anibal Escobedo, an official of the Agriculture Ministry's Forest Sanitation Department, reported. These measures are: More vigilance at control posts along the border; inspection of coffee plantations next to Salvadoran plantations and copper [sulfate] fumigation in coordination with the national coffee association before the harvest period begins. This is to prevent possible contamination from Salvadoran workers who will be coming to Guatemala to work on the coffee plantations. Man is thought to be main carrier of the disease from one plantation to another. [Text] [PA301607 Guatemala City Mundial Network in Spanish 1419 GMT 29 Sep 80]

CSO: 5400

HONDURAS

BRIEFS

WORMS DESTROY YUCA CROP--Cusuna, Colon--Yuca producers of the Department of Colon are the victims of a plague of worms produced by butterflies. The plague extends from the community of Limon to Sangrelaya, and has destroyed almost all the crops and damaged the rice and plantain crops. The plague appeared some 7 days ago, and that has been enough time to cause great damage in the above-mentioned crops, creating a general concern among the people of the area, where this year's production will surely be lost. Yuca is the only crop on which thousands of families depend. According to reports, 2 years ago the yuca crops were attacked by the same insect, but on that occasion the birds ate the worms. This counteracted the plague and the damages were minor. This time the butterflies are coming in large quantities, are eating the crop leaves and are producing the worms, which complete the destruction of the crops. Those knowledgeable about this type of situation have said that if government authorities do not get involved in controlling the plague, it could extend to other regions of the country, endangering the livelihood of thousands of our countrymen who farm the land. [Text] [San Pedro Sula LA PRENSA in Spanish 8 Aug 80 p 4] 9341

COFFEE RUST DENIAL--Natural Resources Minister Rodrigo Castillo today denied reports published in a San Pedro Sula newspaper and aired on a Tegucigalpa radio station saying that there is coffee rust in our country. According to the official, there would be no reason to deny the existence of the coffee rust if it existed, but it doesn't. He said that the disease has not entered our country and that he is basing his statement on technical reports that were recently delivered to him. Castillo said that there are other blights which are affecting the country's coffee plantations such as the leaf disease [ojo de gallo], the stalk borer and mildew, but not coffee rust. If we did have coffee rust here, we would be obligated to tell the coffeegrowers about it and show them how to fight it. Also, this would not mean that there would not be any coffee produced because in countries such as Brazil the coffeegrowers have learned to live with it. He also said that the quarantine measures have been increased particularly in the areas where it was said that the rust had entered. Control points have been established in neighboring areas where there is an influx of Salvadorans coming into Honduras. [Text] [PA251937 Tegucigalpa Domestic Service in Spanish 1130 GMT 25 Sep 80]

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

HUBEI INSECT PESTS--According to the Hubei provincial forecasting station on insect pests, it is necessary to adopt precautionary measures against the outbreak of the fifth generation of rice leafhoppers to insure a bumper harvest of late rice. At present, the most serious problem is the continuous high temperature. These insects will hatch on 10 September. If this is not controlled, there will be large-scale damage to the late rice in early October. Therefore, all areas must urgently become mobilized. [Wuhan Hubei Provincial Service in Mandarin 1100 GMT 10 Sep 80 HK]

CSO: 5400

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